



Natural Heritage & Endangered Species Program

Massachusetts Division of Fisheries & Wildlife
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Tiny-flowered Buttercup

Ranunculus micranthus Nutt.

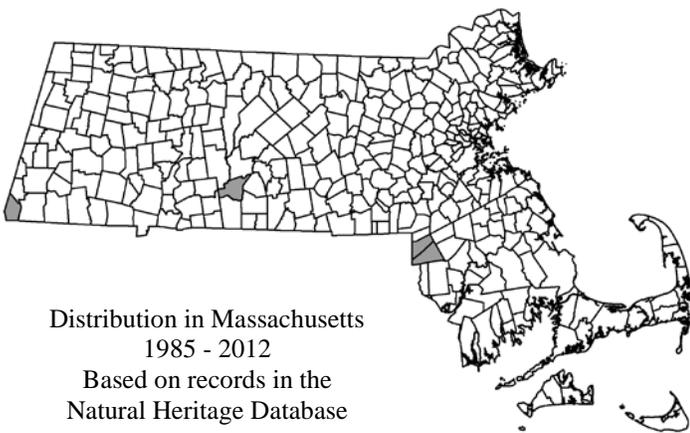
State Status: Endangered

Federal Status: None

Description: Tiny-flowered Buttercup is an inconspicuous, spring-flowering member of the Buttercup family (Ranunculaceae), typically found on rocky slopes. The 20 to 50 cm (8–20 in.) erect stem and leaves are covered in fine, straight hairs. Each of the six or so ground-hugging basal leaves has a relatively long (~5 cm) petiole with a round blade that is flattened at the base and has rounded teeth separated by sharp, small incisions (occasionally divided). Stem leaves are largely sessile and are divided into three or four narrow sections, which may be toothed. The stem may branch, and each stem is topped by one to several tiny flowers (5–6 mm across) with yellow petals. The whole plant is covered with short hairs. This species blooms early in the spring before the leaves of canopy trees shade the forest floor. It then fruits and withers away by early July.



Tiny-flowered Buttercup has flowers that are 5 to 6 mm wide, with narrow stem leaves that are largely sessile. Photo by Bruce Sorrie.



Aids to Identification: Tiny-flowered Buttercup is one of several small buttercups that occur in Massachusetts. Hairy (villous) stems and leaves help to distinguish this species from other small buttercups. In Tiny-flowered Buttercup, some roots are also conspicuously thickened.

Similar species: Small-flowered Buttercup (*R. abortivus*) and Allegheny Crowfoot (*R. allegheniensis*) have kidney-shaped basal leaves, and are completely hairless.

Flowering in Massachusetts

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Population Status in Massachusetts: Tiny-flowered Buttercup is listed under the Massachusetts Endangered Species Act as Endangered. All listed species are protected from killing, collecting, possessing, or sale, and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. Tiny-flowered Buttercup is currently known from Berkshire, Hampden, and Bristol Counties, and was known historically from Worcester, Middlesex, Essex, Suffolk, and Norfolk Counties.

Range: Tiny-flowered Buttercup occurs from Massachusetts to Illinois and South Dakota, south to northern Georgia and Arkansas. It is widespread but uncommon throughout most of its range.

Habitat: Massachusetts is at the northern end of the range of Tiny-flowered Buttercup, and it typically occurs here on south-facing slopes in patches of soil between rock outcrops. Tiny-flowered Buttercup occurs under a light to moderate canopy, often in areas with basaltic or other mafic (iron- and magnesium-rich) bedrock. Trees include Red Oak (*Quercus rubra*), Pignut Hickory (*Carya glabra*), Sugar Maple (*Acer saccharum*), Hop Hornbeam (*Ostrya virginiana*), and Flowering Dogwood (*Benthamidia florida*). Associated species include Ebony Spleenwort (*Asplenium platyneuron*), Blunt-lobed Woodsia (*Woodsia obtusa*), Early Saxifrage (*Micranthes virginensis*), Round-lobed Hepatica (*Anemone americana*), and Three-lobed Violet (*Viola palmata*).

Threats and Management Recommendations:

Threats to Tiny-flowered Buttercup include invasive plants, development, shade from trees or encroaching shrubs, and rockslides. Populations should be monitored regularly; if exotic or native plants are out-competing this species, a plan should be developed, in consultation with the Massachusetts Natural Heritage & Endangered Species Program, to remove the competitors. Known habitat locations should be protected from dramatic changes in light or moisture conditions. Rare plant locations that receive heavy recreational use should be carefully monitored for plant damage or soil disturbance. All active management of rare plant populations (including invasive species removal) is subject to review under the Massachusetts Endangered Species Act, and should be planned in close consultation with the Massachusetts Natural Heritage & Endangered Species Program.

References and Additional Information:

Gleason, H. A., and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*, 2nd edition. The New York Botanical Garden, Bronx, NY.

USDA, NRCS. 2010. The PLANTS Database (<http://plants.usda.gov>). National Plant Data Center, Baton Rouge, LA.

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